

Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the present application.

Listing of Claims:

1. (Currently Amended) A workstation for performing steps of a resin application process for dynamo-electrical machine components, said workstation comprising a plurality of units, wherein at least one of said units is of a first type comprising:

a cabinet for providing a controlled ambient during the performance of a step of said process; and

a rotating vertical support structure disposed in said cabinet, said support structure having a plurality of fixtures disposed in an annular region thereon configured to hold said components within hollow interiors of the fixtures during the performance of said step, said fixtures comprising open structures configured to allow air to circulate through the interiors of the fixtures to expose substantial surface portions of said held components to said controlled ambient.

2. (Original) The workstation of claim 1 wherein a said fixture comprises a structure for receiving said components therein along a path substantially

perpendicular to the face of said rotating vertical support structure.

3. (Original) The workstation according to claim 1 wherein said cabinet further comprises an annular compartment having said controlled ambient, and wherein said held components travel through said annular compartment as said vertical support structure rotates during the performance of said process step.

4. (Previously Presented) The workstation according to claim 1 wherein the temperature of said controlled ambient is controlled by flow of heated air through said cabinet.

5. (Canceled)

6. (Original) The workstation of claim 1 further comprising a control unit to control rotation of said vertical support structure.

7. (Original) The workstation of claim 6 wherein the rotation of said vertical support structure is intermittent with alternating periods of rotation and periods of pause, and wherein at least one of said fixtures

is aligned with a predetermined position during said periods of pause.

8. (Original) The workstation of claim 7 wherein the angle of rotation during a said period of rotation is less than about one half a radian.

9. (Original) The workstation of claim 7 wherein said predetermined position corresponds to a position for loading and unloading components from said aligned fixture.

10. (Original) The workstation of claim 1 wherein said plurality of units are disposed adjacent each other, said workstation further comprising movable transfer devices disposed alongside said plurality of units for loading and unloading components from said units, and for transferring components between said plurality of units, wherein said movable transfer devices are capable of motion in linear spatial dimensions.

11. (Original) The workstation according to claim 1 wherein a first one of said plurality of units preheats said components in preparation of subsequent resin application.

12. (Original) The workstation according to claim 11 wherein a second one of said plurality of units applies resin to said components.

13. (Original) The workstation according to claim 12 wherein said second one of said plurality of units is a unit of said first type.

14. (Original) The workstation of claim 13 wherein a multiplicity of said fixtures in said second one of said plurality of units are aligned with a multiplicity of resin-receiving positions as said vertical support structure rotates, and wherein at said resin-receiving positions resin is applied to components loaded in said aligned fixtures.

15. (Original) The workstation of claim 14 wherein said second one of said plurality of units further comprises resin-dispensing units that are disposed vertically above said resin-receiving positions.

16. (Original) The workstation of claim 13 wherein said second one of said plurality of units further comprises vertically movable resin-bearing trays that are disposed vertically below said resin-receiving positions.

17. (Original) The workstation according to claim 1 wherein a third one of said plurality of units heats said components to cure the resin applied to said components.

18. (Original) The workstation according to claim 1 wherein said plurality of units comprise:

a preheating unit of said first type for heating components in preparation for subsequent resin application;

a resin application unit of said first type disposed adjacent to said preheating unit for applying resin to preheated components;

a resin-curing unit of said first type disposed adjacent to said resin application unit for heat curing the resin applied to components;

movable transfer devices disposed alongside said plurality of units for loading and unloading components from said plurality of units and for transferring components between said plurality of units; and

a control unit to control rotation of said vertical support structures in said preheating, resin application, and resin curing units, and to control said movable transfer devices.

19. (Original) The workstation of claim 18 wherein said control unit synchronizes the intermittent rotation of said vertical support structures such that the periods of pause in said preheating unit, in said resin application unit, and in said resin curing unit occur substantially simultaneously such that said vertical support structures are stationary at substantially a same time interval.

20. (Original) The workstation of claim 19 wherein said control unit supervises said transfer devices to load and unload components from said plurality of units during said same time interval while said vertical support structures are stationary.

21. (Currently Amended) A unit for performing a resin application process step for dynamo-electric machine components, said unit comprising:

a cabinet for providing a controlled temperature ambient during the performance of said process step; and

a rotating vertical support structure disposed in said cabinet, said support structure having an array of fixtures disposed in an annular region thereon configured to hold said components within hollow interiors of the fixtures, wherein said held components travel

through said controlled ambient as said vertical support structure rotates during the performance of said process step, said fixtures comprising open structures configured to allow air to circulate through the interiors of the fixtures to expose substantial surface portions of said held components to said controlled ambient.

22. (Original) The unit of claim 21 wherein a said fixture comprises a structure for receiving said components therein along a path substantially perpendicular to the face of said rotating vertical support structure.

23. (Original) The unit of claim 21 wherein said controlled temperature ambient is controlled by flowing heated air through said cabinet.

24. (Canceled)

25. (Previously Presented) The unit of claim 21 wherein said cabinet further comprises an annular compartment having said controlled ambient, and wherein said held components travel through said annular compartment as said vertical support structure rotates during the performance of said process step.

26. (Original) The unit of claim 21 wherein said cabinet further comprises a compartment for cooling said components after the performance of said process step.

27. (Withdrawn) A method for applying resin to dynamo-electrical machine components, comprising:

loading said components in first holding fixtures, wherein said first holding fixtures are disposed in an annular region on the face of a first vertical support plate rotatably mounted in a preheating cabinet;

flowing heated air through said cabinet to provide a temperature controlled ambient therein;
rotating said first vertical support plate such that said loaded components travel through said controlled temperature controlled ambient and are heated to a predetermined temperature;

unloading said heated components from said preheating cabinet;

transferring said unloaded heated components to a resin application unit, wherein said resin application unit comprises means for applying a quantity of resin to said components; and

applying resin to said transferred components in said resin application unit.

28. (Withdrawn) The method of claim 27 wherein said rotating said first vertical support plate further comprises rotating said first vertical plate intermittently with first periods of rotation alternating with first periods of pause such that that a said first holding fixture disposed on said first vertical support plate is aligned with a first loading position, wherein said unloading said heated components from said preheating cabinet further comprises unloading a said heated component from said first holding fixture aligned with said first loading position during a said first period of pause, and wherein loading said components in first holding fixtures further comprises loading a said component in said first holding fixture aligned with said first loading position from which said heated component has been unloaded during same said first period of pause.

29. (Withdrawn) The method of claim 28 wherein transferring said unloaded heated components to a resin application unit further comprises:

reloading said unloaded heated components in an empty second holding fixture, wherein a plurality of said second holding fixtures are disposed in an annular region on the face of a second vertical support plate rotatably mounted in said resin application unit, and wherein said reloading occurs while said second vertical

support plate is stationary and said empty second holding fixture is aligned with a second loading position; and wherein applying resin to said transferred components in said resin application unit further comprises:

intermittently rotating said second vertical support plate with second periods of rotation alternating with second periods of pause to advance said reloaded heated component away from said second loading position through said resin application unit; and

using said means for applying a quantity of resin during a second period of pause after said advanced component has moved away from said second loading position to apply resin said advanced component.

30. (Withdrawn) The method of claim 27 further comprising:

heat curing the resin applied to said components.

31. (Withdrawn) The method of claim 30 wherein heat curing the resin applied to said components further comprises:

transferring said components with resin applied to them out of said resin application unit; loading said components in third holding fixtures, wherein said third holding fixtures are disposed in an annular

region on the face of a third vertical support plate
rotatably mounted in a resin-curing cabinet;

flowing heated air through said resin-curing
cabinet to provide a temperature controlled ambient
therein; and

rotating said third vertical support plate
such that said loaded components travel through said
controlled ambient to heat said applied resin.